## SARI

Geologi, Alterasi, dan Mineralisasi Daerah Pujiharjo dan Sekitarnya,
Kecamatan Tirtoyudo, Kabupaten Malang,
Provinsi Jawa Timur

Oleh :
Kenang Aryanadela Supartoto / H1F013057

Daerah Pujiharjo dan sekitarnya secara geologi terdapat batuan beku intrusi, sehingga memungkinkan batuan yang ada pada daerah tersebut mengalami alterasi (terubah) dan mineralisasi, sehingga dimungkinkan diendapkan mineral-mineral berharga. Penelitian ini bertujuan untuk mengetahui persebaran alterasi dan mineralisasi yang terdapat pada daerah penelitian. Metode penelitian menggunakan pemetaan geologi, pengamatan singkapan batuan teralterasi dan termineralisasi dengan analisis petrografi, mineralgrafi, dan ASD Terraspec. Berdasarkan hasil penelitian batuan intrusi berupa medium grain diorit, coarse grain diorit, dan andesit yang berumur oligosen akhir-miosen awal yang mengakibatkan terbentuknya alterasi pada daerah penelitian. Struktur geologi yang terbentuk berupa sesar mendatar berarah relatif utara-selatan dan barat-timur. Berdasar hasil analisis mineralisasi batuan dapat diketahui mineral alterasi ada daerah penelitian, mineral alterasi di kelompokkan berdasar himpunan mineral yaitu K-feldspar-biotit, muskovit-illite, FeMg klorit, Mg klorit yang mencirikan mineralisasi porfiri dipengaruhi struktur relatif barat-timur dan Dikit-Kaolinite-Kuarsa, dan Illite-Halloysite yang mencirikan mineralisasi epitermal sulfida tinggi dipengaruhi struktur relatif utara-selatan. Ditemukan mineralisasi bijih berupa pirit, kalkopirit, kovelit, bornit, kalkosit, dan magnetit. Kajian geologi, alterasi dan mineralisasi menunjukan daerah penelitian mengalami proses alterasi dan mineralisasi yang *intens* serta memiliki prospek mineral bijih yang cukup baik.



Kata kunci : Alterasi, Mineralisasi, Porfiri, Epitermal Sulfida Tinggi.

# ABSTRAK

Geology, Alteration, and Mineralization at Pujiharjo and the Surrounding Area,
Tirtoyudo District, Malang Regency,
East Java Province

By :
Kenang Aryanadela Supartoto / H1F013057

Pujiharjo and the surrounding area from geological perspective has intrusion igneous rocks, that made it possible for the area to form alteration and mineralization, which possibly deposit precious metals. This study goal is to understand the alteration and mineralization distribution at the study area. Study method used geology mapping, altered and mineralization rock outcrop observation by using petrography analysis, mineralgraphy and ASD Terraspec. Based on study results the intrusion rock is a medium grain diorite, coarse grain diorite, and andesite that has age of late oligocene – early miocene that caused it to form alteration at the study area. Geology structure that develop is strike-slip fault with relative direction of north-south and west-east. Based on rock mineralization analysis it is known that alteration mineral in the study area is classified into mineral assosciation of K-feldspar-biotite, muskovite-illite, FeMg chlorite, Mg chlorite that shows porphyritic mineralization influenced by relative west-east structure and Dikit-Kaolinite-Quartz and Illite-Halloysite that shows high sulhide epithermal mineralization influenced by north-south relative structure. It is found precious metal mineralization in the form of pyrite, chalcopyrite, covelite, bornite, chalcosite and magnetite. Based on geology, alteration and mineralization study shows that the study area had an intense alteration and mineralization process and is a good metal ore prospect.

Keywords : Alteration, Mineralization, Porphyritic, High Sulphide Epithermal